

Listing of Claims:

1. (Currently amended) A battery separator, comprising:

a polymer web and a silica component;

a the polymer web having first and second major surfaces and including fibrils of
an ultrahigh molecular weight polyolefin of a molecular weight that provides sufficient
molecular chain entanglement to impart high-strength mechanical properties to the
polymer web, and a the silica component that facilitates imparting wettability properties to
the separator wettability; and

a coating substance including an antioxidant material present on at least one of the
first and second major impregnating the polymer web surfaces, the coating substance
forming sheaths around the polyolefin fibrils throughout the web to suppress polyolefin
degradation and thereby maintain the high-strength mechanical properties, and the coating
substance leaving intact the wettability properties imparted by the silica component.

2. (Original) The battery separator of claim 1, in which the antioxidant material
includes (tetrakis[methylene(3,5-di-tert-butyl-4-hydroxyhydrocinnamate)] methane).

3. (Canceled)

4. (Canceled)

5. (Currently amended) The battery separator of claim 1, in which the polymer
web has a major surface on which the coating substance including an antioxidant material
is present and in which the coating substance on the ~~first~~ major surface of the polymer web
is applied by a method selected from the group consisting essentially of brushing,
spraying, immersion, and roller-based application.

6. (Currently amended) The battery separator of claim 1, in which the polymer
web has first and second major surface of the polymer web surfaces and in which one of
them is positioned adjacent an electrode structure to form a battery assembly into which is
placed an electrolyte that is at least partly absorbed by the electrode structure.